

# CUBIT Capability Proposal

**Technical Area**

Geometry, Meshing, Infrastructure, GUI, Graphics, etc..

**Technical Lead**

Cubit Developer in charge of technical area

Meshing	Matt Staten
---------	-------------

**MRD Description**

Describe the capability in terms of how a user would see it.

4.2.2.0-4 Provide a capability to sweep wedge-shaped elements when source surface is composed of triangles.
---

**SRS Description**

What needs to be done by Cubit developers to implement this capability? Break the tasks into steps if applicable. (Steps should be on the order of 2 man-weeks or more)

- |  |
|--|
| <ol style="list-style-type: none"><li>1. Verify implementation of Cubit wedge element, i.e., storage, import/export, graphics, etc.</li><li>2. Modify CAMAL sweeper to allow all triangle or mixed triangle/quadrilateral source meshes. The triangles will generate wedge elements when swept.</li><li>3. Modify CAMAL sweeper to generate wedge elements from quadrilaterals swept about an axis through an edge of the quadrilateral, i.e., source and target surfaces share an edge.</li></ol> |
|--|

**Justification**

Describe why this is important and what impact it will have if it is implemented. (or not implemented).

The ability to sweep triangles to form wedge elements will increase the utility of the CAMAL sweeper, and therefore Cubit, wherever hybrid meshes are useful. Sweeping with a zero radius around an axis will make meshing easier in those cases where mixed element meshes are allowed.
--

**Resources**

Who will work on this

**Time estimate**

How much time will it take in man-weeks

**Targeted Release**

10.2 (August 06), 10.3 (March 2007), 10.4 (August 2007), Future (beyond FY07)

Michael Stephenson	6 man-weeks	10.2
--------------------	-------------	------

**Submitted By:****Date:**

Michael Stephenson	3/27/2006
--------------------	-----------